1. The height, *h(t)*, in feet of an object thrown into the air with an initial upward velocity of 63 feet per second is given by the formula where *t* is the time in seconds. After how many seconds would it take for the object to be 55ft in the air?

2. Suppose a tennis player hits a ball over the net. The equation gives the ball’s height *h* n meters at time *t* in seconds. When will the ball be at the highest point in its path? What will be the balls maximum height?

3. An arrow is shot into the air. It follows a path given by the equation , where *x* is the time in seconds and *y* is the height in feet. Find the arrow’s maximum height.

4. A rocket is launched from atop a 101-foot cliff with an initial velocity of 116 ft/s. The formula

*h*(*t*) = -16*t*² + 116*t* + 101 gives the rocket’s height after *t* seconds. About how many seconds after it is launched will it take the rocket to hit the ground?

A. 0.8 sec B. 8 sec C. 16 sec D. 1.6 sec

**Solve each quadratic equation by the BEST method (formula, factoring, graphing or square rooting)**

4.  5.  6. 

7.  8.  9. 

10.  11.  12. 

13.  14. 